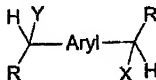


Application No. 10/553,534  
Reply to Office Action of September 29, 2008

Docket No.: 14113-00028-US

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A process for preparing poly(arylenevinylenes), which have a solubility of least 0.5 % by weight in at least one organic solvent, from bis(halomethyl)arylenes which comprises base-induced dehydrohalogenation, wherein the reaction is carried out in the presence of 0.1-80 mol% between 2 and 40 mol% of one or more compounds of the formula (I):



Formula (I)

where the symbols are defined as follows:

Aryl is the same or different at each instance and is a bivalent aromatic or heteroaromatic ring system which has from 2 to 40 carbon atoms and may be is optionally substituted by R<sup>1</sup> radicals or else be unsubstituted, or an R<sup>1</sup>-substituted or unsubstituted stilbenylene unit; the two substituents CHXR and CHYR are arranged in such a way that there is an even number of aromatic atoms between them; the aryl and heteroaryl systems may also be part of a larger fused aromatic ring system; the possible substituents R<sup>1</sup> may potentially be situated at any free position;

R is the same or different at each instance and is an alkyl chain which has from 1 to 40 carbon atoms and may be straight-chain, branched or cyclic, and may also be substituted by one or more R<sup>1</sup> radicals or be unsubstituted, in which one or more nonadjacent carbon atoms may also be replaced by -CR<sup>2</sup>=CR<sup>2</sup>-, -C=C-, -NR<sup>2</sup>-, -O-, -S-, -CO-, -CO-O-, -CONR<sup>2</sup>-, -O-CO-O-, and one or more hydrogen atoms may also be replaced by fluorine, an aromatic or heteroaromatic ring system which has from 2 to 40 carbon atoms and may be substituted by R<sup>1</sup> or be unsubstituted, an R<sup>1</sup>-substituted or unsubstituted stilbenyl or tolanil unit, -Si(R<sup>2</sup>)<sub>3</sub>,

Application No. 10/553,534  
Reply to Office Action of September 29, 2008

Docket No.: 14113-00028-US

$-N(R^2)_2$ ,  $-OR^2$  or a combination of these systems; the aryl and heteroaryl systems may also be part of a larger fused aromatic ring system; the possible substituents may potentially be situated at any free position;

X is the same or different at each instance and is Cl, Br, I, trifluoromethanesulfonate or arylsulfonate;

Y is the same or different at each instance and is Cl, Br, I, trifluoromethanesulfonate, arylsulfonate or  $R^1$ ;

$R^1$  is the same or different at each instance and is a straight-chain, branched or cyclic alkyl chain having from 1 to 40 carbon atoms, in which one or more nonadjacent carbon atoms may also be replaced by  $-CR^2=CR^2$ -,  $-C\equiv C$ -,  $-NR^2$ -,  $-O$ -,  $-S$ -,  $-CO$ -,  $-CO-O$ -,  $-CONR^2$ -,  $-O-CO-O$ -, and one or more hydrogen atoms may be replaced by fluorine, an aromatic or heteroaromatic ring system which has from 2 to 40 carbon atoms and may also be substituted by one or more nonaromatic  $R^1$  radicals, a substituted or unsubstituted vinyl group or Cl, F, CN,  $N(R^2)_2$ ,  $B(R^2)_2$ ; the aryl and heteroaryl systems may also be part of a larger fused aromatic ring system; the possible substituents may potentially be situated at any free position; two or more  $R^1$  radicals together may also form a ring system;

$R^2$  is the same or different at each instance and is H, a straight-chain, branched or cyclic alkyl chain having 1 to 22 carbon atoms, in which one or more nonadjacent carbon atoms may also be replaced by  $-O$ -,  $-S$ -,  $-CO-O$ -,  $-O-CO-O$ -, and one or more hydrogen atoms may also be replaced by fluorine, an aryl or heteroaryl system which has from 2 to 40 carbon atoms and may also be substituted by one or more nonaromatic  $R^1$ .

2. (Previously presented) The process as claimed in claim 1, wherein the halogen atoms in the bis(halomethyl)arylene monomers are the same or different and are each Cl, Br or I.

Application No. 10/553,534  
Reply to Office Action of September 29, 2008

Docket No.: 14113-00028-US

3. (Previously presented) The process as claimed in claim 1, wherein the polymerization is carried out in an ether, an aromatic hydrocarbon, a chlorinated aromatic compound or a mixture of these solvents.
4. (Previously presented) The process as claimed in claim 1, wherein the reaction is carried out in a concentration range from 0.005 to 5 mol/L (monomer/solution volume).
5. (Previously presented) The process as claimed in claim 1, wherein the bases used are alkali metal hydroxides, alkali metal alkoxides or organic amines or amides, or else alkali metal hydrides or metal organyls, provided that the solvents used are not DMSO, alcohols or chlorinated solvents.
6. (Previously presented) The process as claimed in claim 1, wherein the amount of the base used is in the range from 2 to 10 equivalents (based on one equivalent of monomer).
7. (Cancelled)
8. (Previously presented) The process as claimed in claim 1, wherein for the compound of the formula (I):

Aryl is the same or different at each instance and is a bivalent aromatic ring system which has from 2 to 40 carbon atoms and optionally is substituted by up to 4 substituents R<sup>1</sup> or else be unsubstituted, or an R<sup>1</sup>-substituted or unsubstituted stilbenylene unit; the two substituents CHXR and CHYR are arranged in such a way that there is an even number of aromatic atoms between them; the aryl system optionally is part of a larger fused aromatic ring system; the possible substituents R<sup>1</sup> may potentially be situated at any free position;

R is as defined in claim 1;

X is the same or different at each instance and is Cl, Br, I;

Y is as defined in claim 1;

Application No. 10/553,534

Reply to Office Action of September 29, 2008

Docket No.: 14113-00028-US

 $R^1$  and  $R^2$  are each as defined in claim 1.

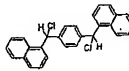
9. (Previously presented) The process as claimed in claim 8, wherein the compound of the formula (I) is selected from the formulae (II) to (XXV) which may be substituted or unsubstituted:



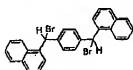
Formula (II)



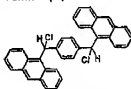
Formula (III)



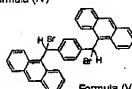
Formula (IV)



Formula (V)



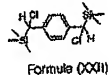
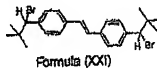
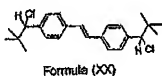
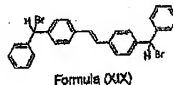
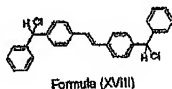
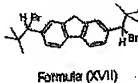
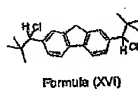
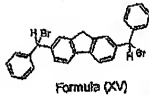
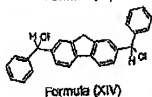
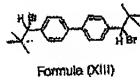
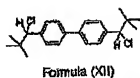
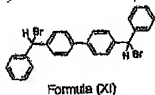
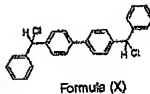
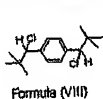
Formula (VI)



Formula (VII)

Application No. 10/553,534  
Reply to Office Action of September 29, 2008

Docket No.: 14113-00028-US



and



10-18 (Cancelled)